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AUTHOR Earl, Archie W., Sr.
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ABSTRACT

An examination of the effect of financial aid on college and university enrollment during a period of steady-state and decline is presented with a focus on the student's decision to go or not to go to college, to matriculate at a private or public college, to attend an in-state or out-of-state school, to transfer from a community college to a four-year college, or to go to graduate or professional school. Student financial aid is analyzed in terms of its effect on admissions policies, attrition and retention rates, stop-out rates, transfer rates, and graduate rates. Retrospective analysis is used to determine the effects, and literature related to student financial aid and published between 1970 and 1981 is reviewed. National, statewide, institutional, and districtwide studies are included. Most studies using a national or statewise base find financial aid significantly affects enrollment in American colleges and universities. Funding for both private and public higher education is ultimately tied to enrollment. Financial aid has been found to be a significant factor in the recruitment and retention processes, and it also helps students decide whether to attend a public or private institution. It will become even more important as institutions of higher education dip deeper into the lower socioeconomic groups in order to compensate for predicted enrollment deficits. With enrollments and financial aid decreasing, many private institutions will be hard pressed to find students unless the trend is reversed. Contains 21 references. (SM)

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A RETROSPECTIVE ANALYSIS OF THE EFFECT OF FINANCIAL AID ON COLLEGE AND UNIVERSITY ENROLLMENT DURING A PERIOD OF STEADY-STATE AND DECLINE

by

Dr. Archie W. Earl, Sr.
Christopher Newport College
Newport News, VA 23606

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INTRODUCTION

Purpose

In light of recent cutbacks, or proposed cutbacks, in state and federal appropriations to higher education, the efficacy, or lack of efficacy, of financial aid in increasing enrollment has become a salient issue. There are many ways to analyze this issue. One of them is to analyze what effect, if any, financial aid has had on enrollment in the past. This is the approach that this study uses. Stated more succinctly, the purpose of this study is to ascertain what effect, if any, financial aid has had on college and university enrollment during a period of steady-state and decline.

In our institutions of higher learning, funding is inextricably linked to enrollments. Because of this, many of our institutions today are faced with the prospect of having to eliminate certain programs from their curricula because of decreases in funds caused by declines in enrollments. In fact, some institutions

have already had to defer hiring needed personnel because of lack of sufficient funds. Some have even had to lay-off tenured faculty members in order to try to keep afloat (e.g., California). The whole public system, in some states, has been threatened with demise (e.g., New York). The question that we must answer today is "What can be done to rectify this exigent dilemma in which we find ourselves?" "Can the present trend of steady-state and declining enrollments be reversed?" Some academicians feel that part of the answers to these and similar questions lie in the administration of student financial aid (Lenning, Sauer, and Beal, 1980). They believe that, with enough of the "right type" of financial aid, the problem of declining enrollments can be ameliorated. The question is, "Are they right?" The answer to this question is evasive and complex.

This paper is an investigation into the effect of student financial aid on steady-state and declining enrollments in colleges and universities in the United States. More specifically, it is a study of the effect of student financial aid on a student's decision (1) to go or not to go to college, (2) to matriculate at a private college instead of a public institution, (3) to

attend an in-state school instead of an out-of-state school, (4) to transfer from a community college to a four-year college, or (5) to go to graduate or professional school. Student financial aid is also analyzed in terms of its effect on admissions polices, attrition and retention rates, stop-out rates, transfer rates, and graduation rates. These are all important factors in the enrollment scenario.

Limitations of the Study

While certain aspects of this study may apply to other countries with similar economic, political, and educational systems, its design limits the findings to colleges and universities in the United States of America. Some of the findings relate to the total enrollment of all colleges and universities in the country at-large, while others relate to certain states, colleges, or specific regions of the country. Some of the findings are not generalizable from state to state. Some are not generalizable from institution to institution. The reader should be aware of these limitations as he, or she, considers the findings in light of his, or her, own unique situation. Since enrollment first started to significantly decelerate

during the 1970s, this study covers the period from 1970 to 1981.

Definition of Terms

In this study "financial aid" is defined as aid received by the student in the form of a grant, scholarship, work-study, or loan. "Steady-state" means enrollment that is neither increasing nor decreasing, but remaining steady. "Declining enrollment" is enrollment wherein there is a decrease in the number of FTE (full time equivalent) students. "Enrollment", at any specific time, is defined as the number of FTE students at that time.

METHODOLOGY

Retrospective analysis was used to determine the effect of financial aid on college and university enrollment during a period of steady state or decline. More specifically, literature related to student financial aid and published between 1970 and 1981 was reviewed and analyzed. Four types of studies were included in the analysis, viz., national, statewide, institutional, and districtwide. Comparisons of results were made within each of the first three categories and between all four of the categories. Finally, the data were summarized and conclusions

stated about the effect of student financial aid on college and university enrollment.

HISTORICAL BACKGROUND OF THE STUDY AND REVIEW OF RELATED LITERATURE

Historical Background

Most of America's earliest colleges and universities were privately endowed. A common pattern in their development included personal solicitation: a clergyman would approach a wealthy prospective donor with the idea of founding a college; the wealthy donor, or sometimes a religious organization, would put up the money to run the college and the land on which it was to be built; the charter would then be acquired from the Crown or the state government and the college would be founded. The clergyman usually became the first president of the college, and the donor's name became the name of the institution. These colleges were usually so well endowed and simple that they did not have to depend on state or federal financing to meet their budgets. (According to Rudolph (1962), many of these so-called private colleges received financial aid from some states as early as 1879.)

Because the early American colleges and universities were largely transplants of their European

counterparts, it soon became apparent that they would not be able to meet the needs of the new and growing Nation. The Country needed a more diverse and utilitarian curriculum, but because of their lack of adaptability, the transplanted colleges and universities were not able to provide it. They could not, or would not, change to meet the needs of a changing society. Hence, new institutions--state universities--had to be created. By the 1860s state universities had become a permanent fixture on the higher education horizon.

The federal government did not contribute significantly to higher education financing until 1862. In that year the first Morrill Act was enacted. It provided for the creation of agricultural and mechanics (A-and-M) schools, the forerunners of today's land grant colleges, at federal expense. In 1890, the second Morrill Act was enacted. This act established a system of continued federal aid to American colleges and universities. Many "private" institutions put up pseudo-A-and-M components on their campuses to attract federal funds. These two acts are considered, by many, landmarks on the perilous road to more involvement, financially and otherwise, of the federal government in

private, as well as public, higher education.

The period from 1890 to the mid 1940s showed a steady, but slow, increase in federal and state spending for public and "private" higher education. However, it was not until after World War II that federal financing to public and private higher education took a quantum leap. The G.I. Bill (Serviceman's Readjustment Act) had been enacted in 1944, and with the end of the War, "Johnie came marching home again" and into the halls of our colleges and universities. In 1958, the National Defense Education Act was passed. Among other things, this act provided loans for undergraduate students. In 1964, the Economic Opportunity Act was passed. It provided grants to higher education institutions for the establishment of work-study programs. Later, in 1965, the Educational Opportunity Grant (now called the Basic Educational Opportunity Grant, or BEOG) was established. Nineteen-hundred-seventy-two brought further expansion of federal aid with the establishment of the SEOG (Supplemental Educational Opportunity Grant) and the GSL (Gauranteed Student Loan) programs. The Pell Grant was also created in that year. The Middle Income Assistance Act (MIAA) of 1978 made

federal funds more available to middle income families. In 1981 changes in the Guaranteed Student Loan program were made, requiring students with family income of over $30,000 to show need. While all of this federal legislation was being passed, states were reacting similarly.

During the 1950s and the 1960s and, to a lesser extent, the early 1970s financial aid was inextricably linked to the goals of increasing access and equal opportunity in higher education. These were periods of increasing enrollments and easy availability of state and federal funds. By 1980, things had changed. Many colleges and universities were experiencing steady-state or declining enrollments. Because of this, part of the financial aid effort became diverted from access/equality goals to goals that would enable colleges and universities to increase, or at least maintain, their enrollments. This study investigates the effects of such newly directed efforts on enrollments at colleges and universities in the United States.

Literature Review

Van Dusen (1974), using the Student Resource Surveys as a data base to analyze the relationship between community college students that transfer to four-year institutions and financial aid, concluded that if colleges and universities are really serious about increasing their enrollments by attracting more transfer students from community colleges, they should review their financial aid policies to make sure that they are not discouraging such students from matriculating and finishing their education. He further states that institutional financial aid offices at four-year institutions are consistently awarding community college transfer students less institutionally controlled aid than first time admittees. This study introduces a variable--the transfer student--that many other researchers failed to take into account in their investigations (Tierney, 1980a, 1980b; Brown, 1980; Hodgkinson, 1980). Van Dusen also noted that transfer students fared well in

financial aid programs that were not under the plenary control of the institution, i.e., BEOG, SEOG, and GSL. It is quite possible that if transfer students do not start receiving the aid that they need, they will stop transferring. Such a trend can only tend to exacerbate the decline in enrollments that is already present in many of our colleges and universities today.

Peng and Bailey (1977), using the data from the National Longitudinal Study of the High School Class of 1972 as a data base, obtained similar results. They concluded that a larger percentage of students already enrolled in four-year colleges received more scholarships than did students that transferred from community colleges. What needs to be determined now is (1.) the role financial aid plays in attracting transfer students and (2) the role financial aid plays in determining whether or not transfer students persist.

Fife and Leslie (1976), in a study of scholarship and grant programs in California, New York, New Jersey, and Pennsylvania, found that about 300,000 students had been added to college and university rolls as a consequence of state student financial aid programs. Like Fenske, Boyd, and Maxey (1979), Fife and Leslie

(1976) measured the effect of financial aid as perceived by the student. The students were asked "Would you have gone to college if you had not received a scholarship or grant?" Both studies were analyses of the effect of state financial aid on college and university enrollments. In both studies, the effect was significant.

Fuller (1976), in a study of the 1973 graduating class of the Los Angeles school district, concluded that, even though California has removed all financial barriers to minority and low income students' admissions to the University of California (CU) and California State University and Colleges (CSUC), they still are not attending in substantial numbers. He indicated that much of the reason for this is that they fail to meet admissions criteria based on GPA, Reading Performance, and Mathematical Performance. He went on to say that the important factor in increasing the enrollment of Los Angeles high school graduates in college is no longer financial aid, but breaking down barriers to motivation, achievement, information, and admissions for the disadvantaged. It is interesting to note that, in Los Angeles, financial aid was not determined to be a significant factor in increasing

enrollments, whereas in the state (California) as a whole it was (Fife and Leslie, 1976). It would be of value to higher education planners to know whether or not this seemingly ironic situation holds true for major cities in other states. Fuller's (1976) data also indicated that a larger percentage of low income students were enrolling in private colleges rather than public ones. Assuming the price differential that Finn (1978) and Tierney (1980) talk about, the most probable reason for this anomaly was that private institutions were offering the graduates better financial aid packages. This (the financial aid package) is a factor that Fuller (1976) fails to take into consideration. In analyzing the choices of students that were qualified to attend UC or CSUC, but did not, Fuller (1976) fails to take into consideration the variable of location of the institution.

Wenc (1977), in summarizing studies done by Astin (1975), Spady (1975), Cope and Hannah (1975), and Jencks and Riesman (1968), concluded that in order for institutions to deal with declining enrollments, they should institute comprehensive programs of on-campus work-study. His conclusion was mainly based on Astin's finding that work-study programs appear to be

positively related to student persistence. In that same study, Astin concluded that loans have a negative effect on student persistence. Cope and Hannah (1975, in Wenc, 1977) found that lack of finances is more of a barrier to starting college than it is to finishing. This finding is consistent with the finding of a similar study conducted by Brown (1980). Brown found financial aid to be a significant factor in student persistence only in the freshman year. His data base was information obtained from the National Longitudinal Study of the High School Class of 1972. As stated elsewhere in this paper, findings of studies done on a national scale do not necessarily hold true for individual states and institutions. It might very well be that in the state of Virginia, for example, financial aid is not a significant factor in the freshman year. The Los Angeles-California "anomaly," mentioned earlier in this paper, illustrates this incongruent relationship perfectly. Clearly, more research is needed at each level--state, district, and institutional--that takes into account each unit, or subunit, and its unique set of enrollment variables. One state, for example, might have a large percentage of its students going out of state to study. It seems

reasonable to expect that the results of a study done in this state would be quite different from the results of a similar study conducted in Illinois, where the number of students going out of state to study is negligible (Fenske, Boyd, and Maxey, 1979).

Jackson (1978), using the National Longitudinal Study of the Class of 1972 (NLS) as a data base, concluded that financial aid has very little effect on enticing students to attend college, and that many students that receive it would attend college anyway, even without it. This is consistent with other studies that used a national data base (Sanford, 1980; Tierney, 1980; and Brown, 1980). Jackson also concludes that enrollment is affected more by political and economic conditions, e.g., wars and unemployment, than financial aid. For enrollment on a national scale, this may be true, but certainly, in the flow of students from state to state and from institution to institution, in some cases financial aid might be a significant determinant of which way that flow is going.

In a study of the importance of twelve different variables in influencing students' decisions to enroll in public and private colleges and universities in the state of South Carolina (Wisenaker, 1978), students at

four-year private institutions ranked financial aid higher (third) than did students at four-year public institutions (fourth). This finding has serious implications for public institutions. Perhaps, instead of using low tuition to attract students, they should use larger and more attractive financial aid packages. The data base that Wisenaker used was taken from the NLS of the Class of 1972, the same data base that Brown (1980) and Tierney (1980a, 1980b) used. Of course, his population included all South Carolina students that were included in the NLS and enrolled in colleges and universities within the state. Although Wisenaker's findings are significant, since the sample that he used in his study was not chosen at random from all colleges and universities in South Carolina, generalizations about all students in the state cannot be made as a result of them.

In an institutional study, Novak, Naugher and Rogers (1978) found that at North Texas State University (NTSU), insufficient financial support was a significant factor in the decision of 678 students to dropout of the University. Thirty-one percent of those that dropped out said that they did so because of insufficient funds. The logical conclusion is that if

these students had been able to acquire the needed financial aid, they would have stayed in college and completed their education. Although this is not necessarily true, other research has resulted in similar conjectures (Van Dusen, 1974). There is a need for further research in this area to determine whether or not financial aid would be a significant factor in attracting dropouts back to college. Another finding of the NTSU study was that the attrition rate for freshmen was higher than that for seniors. Other studies have concluded similarly (Cope and Hannah, 1975, reported in Wenc, 1977; Brown, 1980).

Fenske, Boyd, and Maxey (1979), in a trend analysis of the effect of state financial aid on both public and private higher education in Illinois, found that about 50,000 students would not have gone to college if financial aid were not available in academic year 1976 to 1977. They concluded that student financial aid does affect college enrollment. They looked at the enrolment picture from a statewide perspective. We must keep in mind here that since the sample was taken at random from the set of state aid recipients in the state of Illinois, this finding might not be generalizable to other states. Other states

might find that within their jurisdiction financial aid is not a significant factor. This is why each state has to do its own financial aid analysis. This analysis should, most preferably, be conducted by the state's higher education coordinating agency, or an independent consultant.

The above finding is also not generalizable to specific institutions in other states. In fact, they are not even generalizable to every institution in the state of Illinois. It is conceivable that there are some institutions in Illinois that are not affected at all by financial aid. Hence, it behooves each institution not to rely on statewide statistics, but to develop its own, based on its own unique set of variables.

Fenske, Boyd and Maxey (1979) also did an analysis of what the flow of students would be like if financial aid were not made available to them. They asked each student where he or she, would have gone to college if he, or she, had not received any type of financial aid. They found that a significantly larger number of students would have matriculated at public institutions instead of private ones, with little, or no, traffic in the reverse direction. This finding has grave

implications for private institutions, that depend on tuition for the bulk of their operating budgets. According to this finding they are the ones that stand to lose the most, in light of the recent tendency on the part of some politicians to want to reduce, or eliminate, some of the student aid programs.

Brown (1980) also concluded in his study that students with loans-only financial aid had a significantly higher dropout rate than those using loans with some other type(s) of aid. This finding is consistent with those of other researchers (Astin, 1975, in Brown, 1980; Chambers, 1962; Ashworth, 1972, in Sanford, 1980). Brown mentioned that Astin (1975, in Brown 1980), Medsker (1971, in Brown 1980), and Blanchfield (1971, in Brown 1980) arrived at completely different conclusions about the effects of loans on persistence. He did not mention to what the difference might be attributed. It is conceivable that they were probably evaluating the effect of loans at different levels--national, state, and institutional.

Brown also noted that students in the loan-only and the family-support-only categories dropped out at about the same rate. This finding implies that if we gave students, that are now in our colleges and

universities, financial aid packages (excluding the loan-only type) that are presently on family-support-only, it would increase the retention rate in our colleges and universities in the country at-large, and, thereby, enrollment, over the years. University presidents, financial aid officers, and other institutional personnel would do well to note this. Of course, they should be aware of the fact that this study was done on a national scale. They will have to get together with their institutional research and planning offices and find out whether, or not, this finding holds true for their institutions.

Just as one cannot put a square peg into a round hole, one cannot blindly take the results of a study done on a national scale and apply it to the operation of his, or her, specific institution. The least that an institution should do before applying the results from national, statewide, or district studies is compare its population with the population that was used in the study. if there are no significant differences in the two populations, at least then, he, or she, will have a rational basis for proceeding. The best approach, of course, would be to do a complete analysis of his, or her, institution's enrollment,

financial aid function, and the variables that affect them.

Tierney (1980b), using the National Longitudinal Survey as a data base, found that if private colleges and universities increase financial aid (in the form of loans, grants, or scholarships) more than public colleges and universities, it will increase the likelihood that a student will enroll in a private college or university. He said, for example, an increase of $100 in grants and scholarships by private colleges and universities, relative to public ones, will increase the likelihood of a low income white student matriculating at a private college or university by about 6%. Tierney developed a mathematical model that can be used to predict the probability that a student will matriculate at a private institution if one knows the difference between the amounts of aid provided by the institutions and ten other variables. His study is very thorough and comprehensive. At the conclusion of this study he stated that the same figures that he used in his nationwide study could be used by statewide entities. With all do respects to Tierney, many states would do well to develop their own probability function, unless

the characteristics of their populations of prospective students approximate very nearly those of the students used in Tierney's study.

Tierney did another study in 1980 (1980a) using the same data base. The purpose of that study was to determine the actual "tuition gap" that exists between public and private colleges and universities in the United States at-large. The results of the study revealed that all types of financial aid played a significant role in reducing the public/private tuition gap. According to Finn (1978), it is very likely that decreasing the tuition gap will cause many students that would have traditionally attended a lower cost public institution, to matriculate at a more expensive and prestigious private one. Tierney (1980b) also supports this theory. Such a phenomenon, of course, would not cause an increase or decrease in enrollment nationally, but from a state or institutional perspective, the impact could be considerable. State coordinating agencies and legislatures, when they are administering institutional financial aid programs, would do well to keep this in mind.

Many public institutions have had to raise their

tuition and fees in recent years, due to federal and state cut-backs. At the same time, in some states (Virginia, for example), the amount of financial aid allotted to students that attend private institutions has increased. Based on the results of Tierney's studies, these two factors alone would have played havoc with enrollments in public institutions, if private colleges had not had to raise their tuition during that same period in order to keep up with inflation.

Hodgkinson (1980), studying the impact of the 1978 Middle Income Assistance Act on student aid recipients in independent colleges and universities found that the percent of undergraduate students with financial aid increased by 4% after its enactment. The data base used in this study was information obtained from the results of national surveys of financial aid recipients conducted by NIICU (National Institute of Independent Colleges and Universities) in 1978-79 and 1979-80. This study is of national consequence, but the results can only be applied to independent colleges with enrollments of 500 or more and listed in the NCES's (National Center for Educational Statistics') 1978-79 Education Directory. What is now needed is research on

the impact that this act (the MIAA Act) has had on financial aid recipients in public institutions. Also we need to determine how much of this increase in the number of financial aid recipients that Hodgkinson observed represented an actual increase in enrollment.

In studying the relationship between types of financial aid received in undergraduate school and attendance in graduate school at the University of Chicago, Wight (1936, in Sanford, 1980), in a national study of 33,982 1961 college graduates, concluded that finance was the obstacle that stopped many of them from doing advanced study. Golladay and Noel (1978, in Sanford, 1980), using data from the NLS as a data base, reported that in 1976, 13.8% of the students that had financial aid while in undergraduate school, compared to only 8.6% of those who did not, went on to graduate school. Sanford (1978, in Sanford, 1980), studying the 1976 graduates, from the University of North Carolina at Chapel Hill one year after graduation, concluded that the number of students attending was not related to the type, or amount, of aid that they received in undergraduate school. These studies emphasize the fact that national enrollment statistics cannot always suffice at the state or institutional level. The

national studies seem to be congruent. But the institutional ones (Wight, 1936) (Sanford, 1978) point in opposite directions.

Sanford did another study in 1980 using the data from the National Longitudinal Study (NLS) of the High School Class of 1972 as a data base. The findings of this study were quite different from his findings at Chapel Hill. In the 1980 study, which was of national consequence, he concluded that receiving grants in undergraduate school was the only type of financial aid that had a significant effect on whether or not a student went on to graduate school. He also found that having had grants and work-study together in undergraduate school correlated positively and significantly with attendance in graduate school. It is apparent, from the results of this study, that undergraduate grants are the most effective type of financial aid for encouraging students to go on to graduate school.

MacDonald (1981), analyzing the effects that proposed Reagan Administration cuts in the financial aid program would have on students at the University of Delaware, found that: (1.) Eliminating the interest rate subsidy on GSLs (the first proposal) would result

in a 20% reduction in students in the program, (2.) Adopting a need-base approach to the GSL program (proposal number two) would result in a 40% reduction, (3.) Redefining the eligibility criteria for the Pell Grant (proposal number three) would result in a 35% reduction in the amount of money available in this program, and (4.) Phasing out the Social Security Student Benefit program would result in 100 University students losing $50,000 per month. Clearly, each of these proposed options will have a significant effect on the financial aid function at the University of Delaware, if they are enacted. Also, if the students that are eliminated from these programs (when and if these proposals are enacted) are not able to attend the University without the types of financial aid that they provide, the effect on enrollment at Delaware would be substantial.

Kehoe (1981) studied the impact of the offer of financial aid on the decisions of Pennsylvania's high school seniors to attend colleges in-state or out-of-state. He acquire his data by administering a survey to a geographically stratified sample of 26,903 Pennsylvania high school seniors. His final sample consisted of 14,885 respondents. The results of his

study indicated that financial aid can be a significant factor in determining whether or not a student decides to attend an in-state or out-of-state institution. He found this to be true only if (1.) his first choice is out-of-state, but he expects to go in-state, or (2.) the student's first choice is in-state, but he expects to go out-of-state. If the student's first choice is in-state and he expects to go in-state, or if his first choice is out-of-state and he expects to go out-of-state, an offer of financial aid would not have any effect. In light of this, Kehoe (1981) concluded that: statewide financial aid policies for attracting students to ins-state colleges and universities should be geared toward students whose "first choice" differs from their "expected to enroll" choice. He further stated that financial aid polices will affect these students because of their responsiveness to monetary considerations.

Carlson (1975, in Kehoe, 1981), interpreting an increase in financial aid as equivalent to a decrease in tuition, concluded that decreasing tuition by $100 would increase enrollment (1) more than 1% among students whose family income is more than $12,000 per year, and (2) more than 7% among students whose family

income is less than $6000 per year. The National Commission on the Financing of Postsecondary Education found similar results (1973, reported in Kehoe, 1981).

The New York State Higher Education Services Corporation (1981), studying the effect of proposals to reduce loan eligibility, concluded that the proposal to require a need analysis for all students and deny loans to graduate students would reduce the number of college students, in the state of New York that have Guaranteed Student Loans by 44%. The same proposal would reduce the number of students in the lowest income group (0-$15,000) by 50%. Clearly, such a financial aid proposal, if enacted, could have a very grave effect on the enrollments of colleges and universities in New York State.

Jensen (1981), analyzing the effect of financial aid on student persistence at Washington State University concluded that financial aid has no significant effect on persistence. He denoted, however, a slight positive relationship in the freshman year, but it was not significant. He also reported a slight negative relationship between the amount of financial aid and persistence, persistence being measured as the number of semesters in attendance. This relationship

was not significant either. Jensen's (1981) study did not take into consideration the two increasingly important variables of race and sex. One of the main goals of financial aid programs is to increase accessibility and equal opportunity. Hence, the sex and race variables are necessary in order to determine whether or not these goals are being met.

SUMMARY, CONCLUSIONS, AND DISCUSSION

In summary (See Table 1.) , most studies that used a national data base found that financial aid significantly affected enrollment in American colleges and universities during the period(s) examined in them. The few statewide studies reviewed concluded similarly, as did the majority of the institutionally based studies. The findings of these studies can only be generalized to the populations from which the samples used in these studies were taken, or similar populations with the same, or similar characteristics. While the evidence on the national level seems conclusive, on the institutional and state levels, it is not so convincing. The samples used in the state level and institutional studies do not represent random samples of all the states and institutions in the United States, and, therefore, their findings cannot be

Table 1

Summary of the Effect of Financial Aid on Enrollment During a Period of Steady-State or Decline

Type of Study	No. Of Studies In Which Financial Aid Had An Effect	No. Of Studies In Which Fin. Aid Did Not Have An Effect
National (n=8)	8 (100%)	0 (0%)
Statewide (n=5)	5 (100%)	0 (0%)
Institutional (n=4)	3 (75%)	1 (25%)
Districtwide (n=1)	0 (0%)	1 (100%)
Total (n=18)	16 (89%)	2 (11%)

generalized to include them. Hence, more research is needed at these levels that takes into account each state, or institution, and its unique set of circumstances.

According to the Carnegie Council on Policy Studies (1980), soon there will be a dearth of students in the traditional college going cohort (18- to 21-year old group). Because of this predicted shortage, colleges and universities, in order to survive, will have to do all they can to figure out ways to reduce its effect on their enrollment.

Funding for both private and public higher education is ultimately tied to enrollment. Because of this, in the present ambience, unless colleges and universities can come up with methods of at least maintaining their enrollments, many of them will have to close their doors by the end of the decade. They cannot afford to go about their search for methods that will help them to maintain or increase their enrollments haphazardly. First, for their enrollment maintenance methods to be effective, their institutional research and planning offices must analyze their enrollments and determine the significant factors, other than decline in birth-rate, that affect

them. Each of these factors must be analyzed thoroughly and completely on an on-going basis. This should not just be a one shot deal--as conditions change, so should enrollment projections, admissions policies, and retention strategies.

The real dilemma that colleges and universities face is not that they don't have enough prospective students to see them through this dearth, but that they must develop new strategies to attract and retain them. Even if we forget about the recruitment side of the coin and concentrate on just retention, there would probably be enough students to sustain all of our colleges and universities during the period of projected decline.

Financial aid has been found to be a significant factor in the recruitment and retention processes by some researchers (Lenning and others, 1980). Many students would not be able to attend college if they did not have some type of financial aid. Furthermore, as institutions of higher learning dip deeper and deeper into the lower socioeconomic groups, in order to compensate for the predicted enrollment deficits, it seems logical to theorize that financial aid will be an even more important factor.

Not only is financial aid an important factor in recruiting and retaining students, but it is also important in helping them to reach a decision on whether to attend a public or a private institution (Tierney, 1980). The tuition gap that exists between the public and private sectors has been a source of conflict for years (Finn, 1978; Tierney, 1980). But with enrollments and financial aid decreasing at the same time many private institutions will be hard pressed to find students. Many students that may have traditionally attended private institutions in the past, will now, due to lack of adequate financial aid and the public-private tuition differential, opt to attend public institutions (Carnegie Council, 1980). Unless something is done to reverse this trend, it may mean the demise of our dichotomous higher education system as we know it today.

The college or university research and planning office should work very closely with the admissions and financial aid offices to try to solve this problem. It will take the commitment of the whole institution to solve it. Each type of financial aid must be evaluated and analyzed for its effect on enrollment as a whole and its various subparts, e.g., retention and

admissions. Some types of financial aid may be detrimental to institutional enrollment, whereas, others may be complimentary. It should be the job of the institutional research and planning office, with the cooperation of the financial aid officer and the admissions officer, to find out which type of aid is detrimental and which type is complimentary. Once this is done, financial aid packages should be designed that will assure the university the best enrollment rate within reason.

Some academicians feel that the most prestigious and selective colleges and universities do not have anything to worry about. But nothing could be further from the truth. As these types of institutions struggle to keep their enrollments up, they will inevitably have to admit students that are at the lower end of the spectrum as far as academic achievement is concerned. Hence, in order to retain these students, they will have to create all types of special programs, e.g., remedial reading, developmental mathematics, etc. Furthermore, research has shown that there is a positive correlation between academic achievement and socioeconomic status (Fuller, 1976). This means that many of these low achieving students will need some

type of financial aid. What type of financial aid should they be awarded? When they are receiving financial aid, will it increase or decrease their probability of persisting at college X? These are just a few of the questions that must be answered if colleges and universities are to meet the challenge of the decades to come.

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